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<110> Pramod K. Srivastava

<120> ALPHA(2) MACROGLOBULIN RECEPTOR AS A HEAT SHOCK
      PROTEIN RECEPTOR AND USES THEREOF

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<212> PRT
<213> Mus musculus

<400> 2
Met Leu Thr Pro Pro Leu Leu Leu Val Pro Leu Leu Ser Ala Leu
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Val Ser Gly Ala Thr Met Asp Ala Pro Lys Thr Cys Ser Pro Lys Gln
            20                  25                  30
```

5

```
Phe Ala Cys Arg Asp Gln Ile Thr Cys Ile Ser Lys Gly Trp Arg Cys
        35                      40              45
Asp Gly Glu Arg Asp Cys Pro Asp Gly Ser Asp Glu Ala Pro Glu Ile
        50              55              60
Cys Pro Gln Ser Lys Ala Gln Arg Cys Pro Pro Asn Glu His Ser Cys
65              70              75              80
Leu Gly Thr Glu Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Ile
                85              90              95
Gln Asp Cys Met Asp Gly Ser Asp Glu Gly Ala His Cys Arg Glu Leu
            100             105             110
Arg Ala Asn Cys Ser Arg Met Gly Cys Gln His His Cys Val Pro Thr
            115             120             125
Pro Ser Gly Pro Thr Cys Tyr Cys Asn Ser Ser Phe Gln Leu Glu Ala
    130             135             140
Asp Gly Lys Thr Cys Lys Asp Phe Asp Glu Cys Ser Val Tyr Gly Thr
145             150             155             160
Cys Ser Gln Leu Cys Thr Asn Thr Asp Gly Ser Phe Thr Cys Gly Cys
            165             170             175
Val Glu Gly Tyr Leu Leu Gln Pro Asp Asn Arg Ser Cys Lys Ala Lys
            180             185             190
Asn Glu Pro Val Asp Arg Pro Pro Val Leu Leu Ile Ala Asn Ser Gln
            195             200             205
Asn Ile Leu Ala Thr Tyr Leu Ser Gly Ala Gln Val Ser Thr Ile Thr
    210             215             220
Pro Thr Ser Thr Arg Gln Thr Thr Ala Met Asp Phe Ser Tyr Ala Asn
225             230             235             240
Glu Thr Val Cys Trp Val His Val Gly Asp Ser Ala Ala Gln Thr Gln
            245             250             255
Leu Lys Cys Ala Arg Met Pro Gly Leu Lys Gly Phe Val Asp Glu His
            260             265             270
Thr Ile Asn Ile Ser Leu Ser Leu His His Val Glu Gln Met Ala Ile
    275             280             285
Asp Trp Leu Thr Gly Asn Phe Tyr Phe Val Asp Asp Ile Asp Asp Arg
    290             295             300
Ile Phe Val Cys Asn Arg Asn Gly Asp Thr Cys Val Thr Leu Leu Asp
305             310             315             320
Leu Glu Leu Tyr Asn Pro Lys Gly Ile Ala Leu Asp Pro Ala Met Gly
            325             330             335
Lys Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys Val Glu Arg Cys
            340             345             350
Asp Met Asp Gly Gln Asn Arg Thr Lys Leu Val Asp Ser Lys Ile Val
    355             360             365
Phe Pro His Gly Ile Thr Leu Asp Leu Val Ser Arg Leu Val Tyr Trp
    370             375             380
Ala Asp Ala Tyr Leu Asp Tyr Ile Glu Val Val Asp Tyr Glu Gly Lys
385             390             395             400
Gly Arg Gln Thr Ile Ile Gln Gly Ile Leu Ile Glu His Leu Tyr Gly
            405             410             415
Leu Thr Val Phe Glu Asn Tyr Leu Tyr Ala Thr Asn Ser Asp Asn Ala
            420             425             430
Asn Thr Gln Gln Lys Thr Ser Val Ile Arg Val Asn Arg Phe Asn Ser
            435             440             445
Thr Glu Tyr Gln Val Val Thr Arg Val Asp Lys Gly Gly Ala Leu His
    450             455             460
Ile Tyr His Gln Arg Arg Gln Pro Arg Val Arg Ser His Ala Cys Glu
465             470             475             480
Asn Asp Gln Tyr Gly Lys Pro Gly Gly Cys Ser Asp Ile Cys Leu Leu
            485             490             495
```

6

Ala Asn Ser His Lys Ala Arg Thr Cys Arg Cys Arg Ser Gly Phe Ser
        500   505   510

Leu Gly Ser Asp Gly Lys Ser Cys Lys Lys Pro Glu His Glu Leu Phe
        515   520   525

Leu Val Tyr Gly Lys Gly Arg Pro Gly Ile Ile Arg Gly Met Asp Met
        530   535   540

Gly Ala Lys Val Pro Asp Glu His Met Ile Pro Ile Glu Asn Leu Met
545   550   555   560

Asn Pro Arg Ala Leu Asp Phe His Ala Glu Thr Gly Phe Ile Tyr Phe
               565   570   575

Ala Asp Thr Thr Ser Tyr Leu Ile Gly Arg Gln Lys Ile Asp Gly Thr
               580   585   590

Glu Arg Glu Thr Ile Leu Lys Asp Gly Ile His Asn Val Glu Gly Val
        595   600   605

Ala Val Asp Trp Met Gly Asp Asn Leu Tyr Trp Thr Asp Asp Gly Pro
        610   615   620

Lys Lys Thr Ile Ser Val Ala Arg Leu Glu Lys Ala Ala Gln Thr Arg
625   630   635   640

Lys Thr Leu Ile Glu Gly Lys Met Thr His Pro Arg Ala Ile Val Val
               645   650   655

Asp Pro Leu Asn Gly Trp Met Tyr Trp Thr Asp Trp Glu Glu Asp Pro
               660   665   670

Lys Asp Ser Arg Arg Gly Arg Leu Glu Arg Ala Trp Met Asp Gly Ser
               675   680   685

His Arg Asp Ile Phe Val Thr Ser Lys Thr Val Leu Trp Pro Asn Gly
        690   695   700

Leu Ser Leu Asp Ile Pro Ala Gly Arg Leu Tyr Trp Val Asp Ala Phe
705   710   715   720

Tyr Asp Arg Ile Glu Thr Ile Leu Leu Asn Gly Thr Asp Arg Lys Ile
               725   730   735

Val Tyr Glu Gly Pro Glu Leu Asn His Ala Phe Gly Leu Cys His His
               740   745   750

Gly Asn Tyr Leu Phe Trp Thr Glu Tyr Arg Ser Gly Ser Val Tyr Arg
               755   760   765

Leu Glu Arg Gly Val Ala Gly Ala Pro Pro Thr Val Thr Leu Leu Arg
        770   775   780

Ser Glu Arg Pro Pro Ile Phe Glu Ile Arg Met Tyr Asp Ala His Glu
785   790   795   800

Gln Gln Val Gly Thr Asn Lys Cys Arg Val Asn Asn Gly Gly Cys Ser
               805   810   815

Ser Leu Cys Leu Ala Thr Pro Gly Ser Arg Gln Cys Ala Cys Ala Glu
               820   825   830

Asp Gln Val Leu Asp Thr Asp Gly Val Thr Cys Leu Ala Asn Pro Ser
               835   840   845

Tyr Val Pro Pro Pro Gln Cys Gln Pro Gly Gln Phe Ala Cys Ala Asn
        850   855   860

Asn Arg Cys Ile Gln Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys
865   870   875   880

Leu Asp Asn Ser Asp Glu Ala Pro Ala Leu Cys His Gln His Thr Cys
               885   890   895

Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg
               900   905   910

Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser
               915   920   925

Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys
        930   935   940

Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp
945   950   955   960

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Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr
                965   970   975
Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn
                980   985   990
Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp
                995   1000   1005
Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn
            1010   1015   1020
Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn Asp
1025   1030   1035   1040
Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln Ala
                1045   1050   1055
Thr Arg Pro Pro Gly Gly Cys His Ser Asp Glu Phe Gln Cys Pro Leu
            1060   1065   1070
Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr Asp
            1075   1080   1085
Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His Val
            1090   1095   1100
Cys Asp Pro Asn Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys Ile
1105   1110   1115   1120
Ser Lys Ala Trp Val Cys Asp Gly Asp Ser Asp Cys Glu Asp Asn Ser
                1125   1130   1135
Asp Glu Glu Asn Cys Glu Ala Leu Ala Cys Arg Pro Pro Ser His Pro
            1140   1145   1150
Cys Ala Asn Asn Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys Asp
            1155   1160   1165
Gly Lys Asp Asp Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp
            1170   1175   1180
Gln Cys Ser Leu Asn Asn Gly Gly Cys Ser His Asn Cys Ser Val Ala
1185   1190   1195   1200
Pro Gly Glu Gly Ile Val Cys Ser Cys Pro Leu Gly Met Glu Leu Gly
                1205   1210   1215
Ser Asp Asn His Thr Cys Gln Ile Gln Ser Tyr Cys Ala Lys His Leu
                1220   1225   1230
Lys Cys Ser Gln Lys Cys Asp Gln Asn Lys Phe Ser Val Lys Cys Ser
            1235   1240   1245
Cys Tyr Glu Gly Trp Val Leu Glu Pro Asp Gly Glu Thr Cys Arg Ser
            1250   1255   1260
Leu Asp Pro Phe Lys Leu Phe Ile Ile Phe Ser Asn Arg His Glu Ile
1265   1270   1275   1280
Arg Arg Ile Asp Leu His Lys Gly Asp Tyr Ser Val Leu Val Pro Gly
                1285   1290   1295
Leu Arg Asn Thr Ile Ala Leu Asp Phe His Leu Ser Gln Ser Ala Leu
            1300   1305   1310
Tyr Trp Thr Asp Ala Val Glu Asp Lys Ile Tyr Arg Gly Lys Leu Leu
            1315   1320   1325
Asp Asn Gly Ala Leu Thr Ser Phe Glu Val Val Ile Gln Tyr Gly Leu
            1330   1335   1340
Ala Thr Pro Glu Gly Leu Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr
1345   1350   1355   1360
Trp Val Glu Ser Asn Leu Asp Gln Ile Glu Val Ala Lys Leu Asp Gly
                1365   1370   1375
Thr Leu Arg Thr Thr Leu Leu Ala Gly Asp Ile Glu His Pro Arg Ala
            1380   1385   1390
Ile Ala Leu Asp Pro Arg Asp Gly Ile Leu Phe Trp Thr Asp Trp Asp
            1395   1400   1405
Ala Ser Leu Pro Arg Ile Glu Ala Ala Ser Met Ser Gly Ala Gly Arg
            1410   1415   1420

8

```
Arg Thr Ile His Arg Glu Thr Gly Ser Gly Gly Cys Ala Asn Gly Leu
1425                1430                1435                    1440
Thr Val Asp Tyr Leu Glu Lys Arg Ile Leu Trp Ile Asp Ala Arg Ser
                1445                1450                1455
Asp Ala Ile Tyr Ser Ala Arg Tyr Asp Gly Ser Gly His Met Glu Val
                1460                1465                1470
Leu Arg Gly His Glu Phe Leu Ser His Pro Phe Ala Val Thr Leu Tyr
                1475                1480                1485
Gly Gly Glu Val Tyr Trp Thr Asp Trp Arg Thr Asn Thr Leu Ala Lys
                1490                1495                1500
Ala Asn Lys Trp Thr Gly His Asn Val Thr Val Val Gln Arg Thr Asn
1505                1510                1515                    1520
Thr Gln Pro Phe Asp Leu Gln Val Tyr His Pro Ser Arg Gln Pro Met
                1525                1530                1535
Ala Pro Asn Pro Cys Glu Ala Asn Gly Gly Arg Gly Pro Cys Ser His
                1540                1545                1550
Leu Cys Leu Ile Asn Tyr Asn Arg Thr Val Ser Trp Ala Cys Pro His
                1555                1560                1565
Leu Met Lys Leu His Lys Asp Asn Thr Thr Cys Tyr Glu Phe Lys Lys
                1570                1575                1580
Phe Leu Leu Tyr Ala Arg Gln Met Glu Ile Arg Gly Val Asp Leu Asp
1585                1590                1595                    1600
Ala Pro Tyr Tyr Asn Tyr Ile Ile Ser Phe Thr Val Pro Asp Ile Asp
                1605                1610                1615
Asn Val Thr Val Leu Asp Tyr Asp Ala Arg Glu Gln Arg Val Tyr Trp
                1620                1625                1630
Ser Asp Val Arg Thr Gln Ala Ile Lys Arg Ala Phe Ile Asn Gly Thr
                1635                1640                1645
Gly Val Glu Thr Val Val Ser Ala Asp Leu Pro Asn Ala His Gly Leu
                1650                1655                1660
Ala Val Asp Trp Val Ser Arg Asn Leu Phe Trp Thr Ser Tyr Asp Thr
1665                1670                1675                    1680
Asn Lys Lys Gln Ile Asn Val Ala Arg Leu Asp Gly Ser Phe Lys Asn
                1685                1690                1695
Ala Val Val Gln Gly Leu Glu Gln Pro His Gly Leu Val Val His Pro
                1700                1705                1710
Leu Arg Gly Lys Leu Tyr Trp Thr Asp Gly Asp Asn Ile Ser Met Ala
                1715                1720                1725
Asn Met Asp Gly Ser Asn His Thr Leu Leu Phe Ser Gly Gln Lys Gly
                1730                1735                1740
Pro Val Gly Leu Ala Ile Asp Phe Pro Glu Ser Lys Leu Tyr Trp Ile
1745                1750                1755                    1760
Ser Ser Gly Asn His Thr Ile Asn Arg Cys Asn Leu Asp Gly Ser Glu
                1765                1770                1775
Leu Glu Val Ile Asp Thr Met Arg Ser Gln Leu Gly Lys Ala Thr Ala
                1780                1785                1790
Leu Ala Ile Met Gly Asp Lys Leu Trp Trp Ala Asp Gln Val Ser Glu
                1795                1800                1805
Lys Met Gly Thr Cys Asn Lys Ala Asp Gly Ser Gly Ser Val Val Leu
                1810                1815                1820
Arg Asn Ser Thr Thr Leu Val Met His Met Lys Val Tyr Asp Glu Ser
1825                1830                1835                    1840
Ile Gln Leu Glu His Glu Gly Thr Asn Pro Cys Ser Val Asn Asn Gly
                1845                1850                1855
Asp Cys Ser Gln Leu Cys Leu Pro Thr Ser Glu Thr Thr Arg Ser Cys
                1860                1865                1870
Met Cys Thr Ala Gly Tyr Ser Leu Arg Ser Gly Gln Gln Ala Cys Glu
                1875                1880                1885
```

9

```
Gly Val Gly Ser Phe Leu Leu Tyr Ser Val His Glu Gly Ile Arg Gly
    1890                    1895                1900
Ile Pro Leu Asp Pro Asn Asp Lys Ser Asp Ala Leu Val Pro Val Ser
1905                    1910                1915                1920
Gly Thr Ser Leu Ala Val Gly Ile Asp Phe His Ala Glu Asn Asp Thr
                1925                1930                1935
Ile Tyr Trp Val Asp Met Gly Leu Ser Thr Ile Ser Arg Ala Lys Arg
                1940                1945                1950
Asp Gln Thr Trp Arg Glu Asp Val Val Thr Asn Gly Ile Gly Arg Val
                1955                1960                1965
Glu Gly Ile Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Thr Asp
                1970                1975                1980
Gln Gly Phe Asp Val Ile Glu Val Ala Arg Leu Asn Gly Ser Phe Arg
1985                    1990                1995                2000
Tyr Val Val Ile Ser Gln Gly Leu Asp Lys Pro Arg Ala Ile Thr Val
                2005                2010                2015
His Pro Glu Lys Gly Tyr Leu Phe Trp Thr Glu Trp Gly His Tyr Pro
                2020                2025                2030
Arg Ile Glu Arg Ser Arg Leu Asp Gly Thr Glu Arg Val Val Leu Val
                2035                2040                2045
Asn Val Ser Ile Ser Trp Pro Asn Gly Ile Ser Val Asp Tyr Gln Gly
                2050                2055                2060
Gly Lys Leu Tyr Trp Cys Asp Ala Arg Met Asp Lys Ile Glu Arg Ile
2065                    2070                2075                2080
Asp Leu Glu Thr Gly Glu Asn Arg Glu Val Val Leu Ser Ser Asn Asn
                2085                2090                2095
Met Asp Met Phe Ser Val Ser Val Phe Glu Asp Phe Ile Tyr Trp Ser
                2100                2105                2110
Asp Arg Thr His Ala Asn Gly Ser Ile Lys Arg Gly Cys Lys Asp Asn
                2115                2120                2125
Ala Thr Asp Ser Val Pro Leu Arg Thr Gly Ile Gly Val Gln Leu Lys
                2130                2135                2140
Asp Ile Lys Val Phe Asn Arg Asp Arg Gln Lys Gly Thr Asn Val Cys
2145                    2150                2155                2160
Ala Val Ala Asn Gly Gly Cys Gln Gln Leu Cys Leu Tyr Arg Gly Gly
                2165                2170                2175
Gly Gln Arg Ala Cys Ala Cys Ala His Gly Met Leu Ala Glu Asp Gly
                2180                2185                2190
Ala Ser Cys Arg Glu Tyr Ala Gly Tyr Leu Leu Tyr Ser Glu Arg Thr
                2195                2200                2205
Ile Leu Lys Ser Ile His Leu Ser Asp Glu Arg Asn Leu Asn Ala Pro
                2210                2215                2220
Val Gln Pro Phe Glu Asp Pro Glu His Met Lys Asn Val Ile Ala Leu
2225                    2230                2235                2240
Ala Phe Asp Tyr Arg Ala Gly Thr Ser Pro Gly Thr Pro Asn Arg Ile
                2245                2250                2255
Phe Phe Ser Asp Ile His Phe Gly Asn Ile Gln Gln Ile Asn Asp Asp
                2260                2265                2270
Gly Ser Gly Arg Thr Thr Ile Val Glu Asn Val Gly Ser Val Glu Gly
                2275                2280                2285
Leu Ala Tyr His Arg Gly Trp Asp Thr Leu Tyr Trp Thr Ser Tyr Thr
                2290                2295                2300
Thr Ser Thr Ile Thr Arg His Thr Val Asp Gln Thr Arg Pro Gly Ala
2305                    2310                2315                2320
Phe Glu Arg Glu Thr Val Ile Thr Met Ser Gly Asp Asp His Pro Arg
                2325                2330                2335
Ala Phe Val Leu Asp Glu Cys Gln Asn Leu Met Phe Trp Thr Asn Trp
                2340                2345                2350
```

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```
Asn Glu Leu His Pro Ser Ile Met Arg Ala Ala Leu Ser Gly Ala Asn
        2355                2360                2365
Val Leu Thr Leu Ile Glu Lys Asp Ile Arg Thr Pro Asn Gly Leu Ala
        2370                2375                2380
Ile Asp His Arg Ala Glu Lys Leu Tyr Phe Ser Asp Ala Thr Leu Asp
2385                2390                2395                2400
Lys Ile Glu Arg Cys Glu Tyr Asp Gly Ser His Arg Tyr Val Ile Leu
                2405                2410                2415
Lys Ser Glu Pro Val His Pro Phe Gly Leu Ala Val Tyr Gly Glu His
                2420                2425                2430
Ile Phe Trp Thr Asp Trp Val Arg Arg Ala Val Gln Arg Ala Asn Lys
        2435                2440                2445
Tyr Val Gly Ser Asp Met Lys Leu Leu Arg Val Asp Ile Pro Gln Gln
        2450                2455                2460
Pro Met Gly Ile Ile Ala Val Ala Asn Asp Thr Asn Ser Cys Glu Leu
2465                2470                2475                2480
Ser Pro Cys Arg Ile Asn Asn Gly Gly Cys Gln Asp Leu Cys Leu Leu
                2485                2490                2495
Thr His Gln Gly His Val Asn Cys Ser Cys Arg Gly Gly Arg Ile Leu
                2500                2505                2510
Gln Glu Asp Phe Thr Cys Arg Ala Val Asn Ser Ser Cys Arg Ala Gln
        2515                2520                2525
Asp Glu Phe Glu Cys Ala Asn Gly Glu Cys Ile Ser Phe Ser Leu Thr
        2530                2535                2540
Cys Asp Gly Val Ser His Cys Lys Asp Lys Ser Asp Glu Lys Pro Ser
2545                2550                2555                2560
Tyr Cys Asn Ser Arg Arg Cys Lys Lys Thr Phe Arg Gln Cys Asn Asn
                2565                2570                2575
Gly Arg Cys Val Ser Asn Met Leu Trp Cys Asn Gly Val Asp Tyr Cys
                2580                2585                2590
Gly Asp Gly Ser Asp Glu Ile Pro Cys Asn Lys Thr Ala Cys Gly Val
        2595                2600                2605
Gly Glu Phe Arg Cys Arg Asp Gly Ser Cys Ile Gly Asn Ser Ser Arg
        2610                2615                2620
Cys Asn Gln Phe Val Asp Cys Glu Asp Ala Ser Asp Glu Met Asn Cys
2625                2630                2635                2640
Ser Ala Thr Asp Cys Ser Ser Tyr Phe Arg Leu Gly Val Lys Gly Val
                2645                2650                2655
Leu Phe Gln Pro Cys Glu Arg Thr Ser Leu Cys Tyr Ala Pro Ser Trp
                2660                2665                2670
Val Cys Asp Gly Ala Asn Asp Cys Gly Asp Tyr Ser Asp Glu Arg Asp
        2675                2680                2685
Cys Pro Gly Val Lys Arg Pro Arg Cys Pro Leu Asn Tyr Phe Ala Cys
        2690                2695                2700
Pro Ser Gly Arg Cys Ile Pro Met Ser Trp Thr Cys Asp Lys Glu Asp
2705                2710                2715                2720
Asp Cys Glu Asn Gly Glu Asp Glu Thr His Cys Asn Lys Phe Cys Ser
                2725                2730                2735
Glu Ala Gln Phe Glu Cys Gln Asn His Arg Cys Ile Ser Lys Gln Trp
        2740                2745                2750
Leu Cys Asp Gly Ser Asp Asp Cys Gly Asp Gly Ser Asp Glu Ala Ala
        2755                2760                2765
His Cys Glu Gly Lys Thr Cys Gly Pro Ser Ser Phe Ser Cys Pro Gly
        2770                2775                2780
Thr His Val Cys Val Pro Glu Arg Trp Leu Cys Asp Gly Asp Lys Asp
2785                2790                2795                2800
Cys Thr Asp Gly Ala Asp Glu Ser Val Thr Ala Gly Cys Leu Tyr Asn
                2805                2810                2815
```

11

```
Ser Thr Cys Asp Asp Arg Glu Phe Met Cys Gln Asn Arg Leu Cys Ile
          2820                2825                2830
Pro Lys His Phe Val Cys Asp His Asp Arg Asp Cys Ala Asp Gly Ser
          2835                2840                2845
Asp Glu Ser Pro Glu Cys Glu Tyr Pro Thr Cys Gly Pro Asn Glu Phe
      2850                2855                2860
Arg Cys Ala Asn Gly Arg Cys Leu Ser Ser Arg Gln Trp Glu Cys Asp
2865                2870                2875                2880
Gly Glu Asn Asp Cys His Asp His Ser Asp Glu Ala Pro Lys Asn Pro
              2885                2890                2895
His Cys Thr Ser Pro Glu His Lys Cys Asn Ala Ser Ser Gln Phe Leu
          2900                2905                2910
Cys Ser Ser Gly Arg Cys Val Ala Glu Ala Leu Leu Cys Asn Gly Gln
          2915                2920                2925
Asp Asp Cys Gly Asp Gly Ser Asp Glu Arg Gly Cys His Val Asn Glu
      2930                2935                2940
Cys Leu Ser Arg Lys Leu Ser Gly Cys Ser Gln Asp Cys Glu Asp Leu
2945                2950                2955                2960
Lys Ile Gly Phe Lys Cys Arg Cys Arg Pro Gly Phe Arg Leu Lys Asp
          2965                2970                2975
Asp Gly Arg Thr Cys Ala Asp Leu Asp Glu Cys Ser Thr Thr Phe Pro
          2980                2985                2990
Cys Ser Gln Leu Cys Ile Asn Thr His Gly Ser Tyr Lys Cys Leu Cys
          2995                3000                3005
Val Glu Gly Tyr Ala Pro Arg Gly Gly Asp Pro His Ser Cys Lys Ala
      3010                3015                3020
Val Thr Asp Glu Glu Pro Phe Leu Ile Phe Ala Asn Arg Tyr Tyr Leu
3025                3030                3035                3040
Arg Lys Leu Asn Leu Asp Gly Ser Asn Tyr Thr Leu Leu Lys Gln Gly
              3045                3050                3055
Leu Asn Asn Ala Val Ala Leu Ala Phe Asp Tyr Arg Glu Gln Met Ile
          3060                3065                3070
Tyr Trp Thr Gly Val Thr Thr Gln Gly Ser Met Ile Arg Arg Met His
      3075                3080                3085
Leu Asn Gly Ser Asn Val Gln Val Leu His Arg Thr Gly Leu Ser Asn
      3090                3095                3100
Pro Asp Gly Leu Ala Val Asp Trp Val Gly Gly Asn Leu Tyr Trp Cys
3105                3110                3115                3120
Asp Lys Gly Arg Asp Thr Ile Glu Val Ser Lys Leu Asn Gly Ala Tyr
              3125                3130                3135
Arg Thr Val Leu Val Ser Ser Gly Leu Arg Glu Pro Arg Ala Leu Val
          3140                3145                3150
Val Asp Val Gln Asn Gly Tyr Leu Tyr Trp Thr Asp Trp Gly Asp His
          3155                3160                3165
Ser Leu Ile Gly Arg Ile Gly Met Asp Gly Ser Gly Arg Ser Ile Ile
      3170                3175                3180
Val Asp Thr Lys Ile Thr Trp Pro Asn Gly Leu Thr Val Asp Tyr Val
3185                3190                3195                3200
Thr Glu Arg Ile Tyr Trp Ala Asp Ala Arg Glu Asp Tyr Ile Glu Phe
              3205                3210                3215
Ala Ser Leu Asp Gly Ser Asn Arg His Val Val Leu Ser Gln Asp Ile
          3220                3225                3230
Pro His Ile Phe Ala Leu Thr Leu Phe Glu Asp Tyr Val Tyr Trp Thr
          3235                3240                3245
Asp Trp Glu Thr Lys Ser Ile Asn Arg Ala His Lys Thr Thr Gly Ala
      3250                3255                3260
Asn Lys Thr Leu Leu Ile Ser Thr Leu His Arg Pro Met Asp Leu His
3265                3270                3275                3280
```

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```
Val Phe His Ala Leu Arg Gln Pro Asp Val Pro Asn His Pro Cys Lys
          3285                3290                3295
Val Asn Asn Gly Gly Cys Ser Asn Leu Cys Leu Leu Ser Pro Gly Gly
          3300                3305                3310
Gly His Lys Cys Ala Cys Pro Thr Asn Phe Tyr Leu Gly Gly Asp Gly
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Pro Gly Gln Phe Gln Cys Ser Thr Gly Ile Cys Thr Asn Pro Ala Phe
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Ile Cys Asp Gly Asp Asn Asp Cys Gln Asp Asn Ser Asp Glu Ala Asn
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Cys Asp Ile His Val Cys Leu Pro Ser Gln Phe Lys Cys Thr Asn Thr
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Asn Gln Phe Gln Cys Ser Ile Thr Lys Arg Cys Ile Pro Arg Val Trp
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Val Cys Asp Arg Asp Asn His Cys Val Asp Gly Ser Asp Glu Pro Ala
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Asn Cys Thr Gln Met Thr Cys Gly Val Asp Glu Phe Arg Cys Lys Asp
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Ser Gly Arg Cys Ile Pro Ala Arg Trp Lys Cys Asp Gly Glu Asp Asp
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Cys Gly Asp Gly Ser Asp Glu Pro Lys Glu Glu Cys Asp Glu Arg Thr
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Cys Glu Pro Tyr Gln Phe Arg Cys Lys Asn Asn Arg Cys Val Pro Gly
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Arg Trp Gln Cys Asp Tyr Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu
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Glu Ser Cys Thr Pro Arg Pro Cys Ser Glu Ser Glu Phe Phe Cys Ala
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Asn Gly Arg Cys Ile Ala Gly Arg Trp Lys Cys Asp Gly Asp His Asp
3585                3590                3595                3600
Cys Ala Asp Gly Ser Asp Glu Lys Asp Cys Thr Pro Arg Cys Asp Met
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Asp Gln Phe Gln Cys Lys Ser Gly His Cys Ile Pro Leu Arg Trp Pro
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Cys Asp Ala Asp Ala Asp Cys Met Asp Gly Ser Asp Glu Glu Ala Cys
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Thr Leu Cys Lys Pro Leu Ala Trp Lys Cys Asp Gly Glu Asp Asp Cys
3665                3670                3675                3680
Gly Asp Asn Ser Asp Glu Asn Pro Glu Glu Cys Ala Arg Phe Ile Cys
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Pro Pro Asn Arg Pro Phe Arg Cys Lys Asn Asp Arg Val Cys Leu Trp
          3700                3705                3710
Ile Gly Arg Gln Cys Asp Gly Val Asp Asn Cys Gly Asp Gly Thr Asp
       3715                3720                3725
Glu Glu Asp Cys Glu Pro Pro Thr Ala Gln Asn Pro His Cys Lys Asp
       3730                3735                3740
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Cys Ser Ile Asp Pro Lys Leu Thr Ser Cys Ala Thr Asn Ala Ser Met
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Cys Gly Asp Glu Ala Arg Cys Val Arg Thr Glu Lys Ala Ala Tyr Cys
            3795                3800                3805
Ala Cys Arg Ser Gly Phe His Thr Val Pro Gly Gln Pro Gly Cys Gln
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Asp Ile Asn Glu Cys Leu Arg Phe Gly Thr Cys Ser Gln Leu Trp Asn
3825                3830                3835                3840
Lys Pro Lys Gly Gly His Leu Cys Ser Cys Ala Arg Asn Phe Met Lys
            3845                3850                3855
Thr His Asn Thr Cys Lys Ala Glu Gly Ser Glu Tyr Gln Val Leu Tyr
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Ile Ala Asp Asp Asn Glu Ile Arg Ser Leu Phe Pro Gly His Pro His
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Ser Ala Tyr Glu Gln Thr Phe Gln Gly Asp Glu Ser Val Arg Ile Asp
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Ala Met Asp Val His Val Lys Ala Gly Arg Val Tyr Trp Thr Asn Trp
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Leu Asn Ile Ser Gly Leu Lys Met Pro Arg Gly Ile Ala Ile Asp Trp
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Val Ala Gly Asn Val Tyr Trp Thr Asp Ser Gly Arg Asp Val Ile Glu
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Val Ala Gln Met Lys Gly Glu Asn Arg Lys Thr Leu Ile Ser Gly Met
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Ile Asp Glu Pro His Ala Ile Val Val Asp Pro Leu Arg Gly Thr Met
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Tyr Trp Ser Asp Trp Gly Asn His Pro Lys Ile Glu Thr Ala Ala Met
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Asp Gly Thr Leu Arg Glu Thr Leu Val Gln Asp Asn Ile Gln Trp Pro
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Thr Gly Leu Ala Val Asp Tyr His Asn Glu Arg Leu Tyr Trp Ala Asp
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Val Phe Lys Ile His Lys Phe Gly His Ser Pro Leu Tyr Asn Leu Thr
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Gly Gly Leu Ser His Ala Ser Asp Val Val Leu Tyr His Gln His Lys
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Gln Pro Glu Val Thr Asn Pro Cys Asp Arg Lys Lys Cys Glu Trp Leu
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Cys Leu Leu Ser Pro Ser Gly Pro Val Cys Thr Cys Pro Asn Gly Lys
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Arg Leu Asp Asn Gly Thr Cys Val Pro Val Pro Ser Pro Thr Pro Pro
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Pro Asp Ala Pro Arg Pro Gly Thr Cys Thr Leu Gln Cys Phe Asn Gly
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Cys Arg Cys Pro Thr Gly Phe Thr Gly Pro Lys Cys Thr Ala Gln Val
                4260                4265                4270
Cys Ala Gly Tyr Cys Ser Asn Asn Ser Thr Cys Thr Val Asn Gln Gly
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Asn Gln Pro Gln Cys Arg Cys Leu Pro Gly Phe Leu Gly Asp Arg Cys
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Gly Arg Val Ala Pro Ser Cys Leu Thr Cys Ile Asp His Cys Ser Asn
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Gly Gly Ser Cys Thr Met Asn Ser Lys Met Met Pro Glu Cys Gln Cys
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Pro Pro His Met Thr Gly Pro Arg Cys Gln Glu Gln Val Val Ser Gln
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Gln Gln Pro Gly His Met Ala Ser Ile Leu Ile Pro Leu Leu Leu Leu
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Leu Leu Leu Leu Leu Val Ala Gly Val Val Phe Trp Tyr Lys Arg Arg
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Val Arg Gly Ala Lys Gly Phe Gln His Gln Arg Met Thr Asn Gly Ala
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Met Asn Val Glu Ile Gly Asn Pro Thr Tyr Lys Met Tyr Glu Gly Gly
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Glu Pro Asp Asp Val Gly Gly Leu Leu Asp Ala Asp Phe Ala Leu Asp
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Pro Asp Lys Pro Thr Asn Phe Thr Asn Pro Val Tyr Ala Thr Leu Tyr
                4500                4505                4510
Met Gly Gly His Gly Ser Arg His Ser Leu Ala Ser Thr Asp Glu Lys
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15

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16

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Val Leu Leu Ser Tyr Leu Asn Glu Thr Val Thr Val Ser Ala Ser Leu
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Glu Ser Val Arg Gly Asn Arg Ser Leu Phe Thr Asp Leu Glu Ala Glu
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Asn Asp Val Leu His Cys Val Ala Phe Ala Val Pro Lys Ser Ser Ser
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Asn Glu Glu Val Met Phe Leu Thr Val Gln Val Lys Gly Pro Thr Gln
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Glu Phe Lys Lys Arg Thr Thr Val Met Val Lys Asn Glu Asp Ser Leu
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18
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Gln Trp Gln Ser Phe Gln Leu Glu Gly Gly Leu Lys Gln Phe Ser Phe
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Pro Leu Ser Ser Glu Pro Phe Gln Gly Ser Tyr Lys Val Val Val Gln
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Lys Lys Ser Gly Gly Arg Thr Glu His Pro Phe Thr Val Glu Glu Phe
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Val Leu Pro Lys Phe Glu Val Gln Val Thr Val Pro Lys Ile Ile Thr
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Gly Lys Pro Val Pro Gly His Val Thr Val Ser Ile Cys Arg Lys Tyr
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Ser Asp Ala Ser Asp Cys His Gly Glu Asp Ser Gln Ala Phe Cys Glu
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Lys Phe Ser Gly Gln Leu Asn Ser His Gly Cys Phe Tyr Gln Gln Val
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Lys Thr Lys Val Phe Gln Leu Lys Arg Lys Glu Tyr Glu Met Lys Leu
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His Thr Glu Ala Gln Ile Gln Glu Glu Gly Thr Val Val Glu Leu Thr
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Gly Arg Gln Ser Ser Glu Ile Thr Arg Thr Ile Thr Lys Leu Ser Phe
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Val Lys Val Asp Ser His Phe Arg Gln Gly Ile Pro Phe Phe Gly Gln
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Thr Ser Leu Thr Val Arg Val Asn Tyr Lys Asp Arg Ser Pro Cys Tyr
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Tyr Leu Val Phe Ser Pro Ser Lys Ser Phe Val His Leu Glu Pro Met
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Ser His Glu Leu Pro Cys Gly His Thr Gln Thr Val Gln Ala His Tyr
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Pro Val Lys Ser Asp Ile Ala Pro Val Ala Arg Leu Leu Ile Tyr Ala
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Glu Asn Cys Leu Ala Asn Lys Val Asp Leu Ser Phe Ser Pro Ser Gln
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Ser Leu Pro Ala Ser His Ala His Leu Arg Val Thr Ala Ala Pro Gln
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19

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Pro Asp Ala Glu Leu Ser Ala Ser Ser Val Tyr Asn Leu Leu Pro Glu
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Pro Val Ser Ser Thr Asn Glu Lys Asp Met Tyr Ser Phe Leu Glu Asp
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Met Gly Leu Lys Ala Phe Thr Asn Ser Lys Ile Arg Lys Pro Lys Met
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Cys Pro Gln Leu Gln Gln Tyr Glu Met His Gly Pro Glu Gly Leu Arg
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Val Gly Phe Tyr Glu Ser Asp Val Met Gly Arg Gly His Ala Arg Leu
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Glu Thr Trp Ile Trp Asp Leu Val Val Val Asn Ser Ala Gly Val Ala
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Glu Val Gly Val Thr Val Pro Asp Thr Ile Thr Glu Trp Lys Ala Gly
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Tyr Leu Pro Lys Cys Ile Arg Val Ser Val Gln Leu Glu Ala Ser Pro
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Cys Ala Asn Gly Arg Gln Thr Val Ser Trp Ala Val Thr Pro Lys Ser
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Glu Glu Leu Ser Leu Lys Leu Pro Pro Asn Val Val Glu Glu Ser Ala
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Thr Gln Gln Leu Thr Pro Glu Val Lys Ser Lys Ala Ile Gly Tyr Leu
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Asn Thr Gly Tyr Gln Arg Gln Leu Asn Tyr Lys His Tyr Asp Gly Ser
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20

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Ile Thr Ile Ala Leu Leu Glu Ile Pro Leu Thr Val Thr His Pro Val
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21

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23

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24

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25

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        <210> 7
        <211> 126
        <212> PRT
        <213> Homo sapiens

        <400> 7
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1               5                   10                  15
Val Val Glu Asp Lys Ile Tyr Arg Gly Lys Leu Leu Asp Asn Gly Ala
            20                  25                  30
Leu Thr Ser Phe Glu Val Val Ile Gln Tyr Gly Leu Ala Thr Pro Glu
        35                  40                  45
Gly Leu Ala Val Asp Trp Ile Ala Gly Asn Ile Tyr Trp Val Glu Ser
    50                  55                  60
Asn Leu Asp Gln Ile Glu Val Ala Lys Leu Asp Gly Thr Leu Arg Thr
65                  70                  75                  80
Thr Leu Leu Ala Gly Asp Ile Glu His Pro Arg Ala Ile Ala Leu Asp
                85                  90                  95
Pro Arg Asp Gly Ile Leu Phe Trp Thr Asp Trp Asp Ala Ser Leu Pro
            100                 105                 110
Arg Ile Glu Ala Ala Ser Met Ser Gly Ala Gly Arg Arg Thr
        115                 120                 125


        <210> 8
        <211> 153
        <212> PRT
        <213> Homo sapiens

        <400> 8
Leu Leu Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met
1               5                   10                  15
Lys Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr
            20                  25                  30
Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln
        35                  40                  45
```

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```
Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln
    50                  55                  60
Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met
65                  70                  75                  80
Ala Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro
                85                  90                  95
Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val
            100                 105                 110
Ser Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr
            115                 120                 125
Leu Ser Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg Asp Leu
    130                 135                 140
Lys Pro Ala Ile Val Lys Val Tyr Asp
145                 150
```

        <210> 9
        <211> 138
        <212> PRT
        <213> Homo sapiens

        <400> 9
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Met Lys Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys
1               5                   10                  15
Tyr Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val
            20                  25                  30
Gln Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe
        35                  40                  45
Gln Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn
    50                  55                  60
Met Ala Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys
65                  70                  75                  80
Pro Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu
                85                  90                  95
Val Ser Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln
            100                 105                 110
Thr Leu Ser Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg Asp
            115                 120                 125
Leu Lys Pro Ala Ile Val Lys Val Tyr Asp
    130                 135
```

        <210> 10
        <211> 27
        <212> PRT
        <213> Homo sapiens

        <400> 10
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Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val
1               5                   10                  15
Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu
            20                  25
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        <210> 11
        <211> 126
        <212> PRT
        <213> Homo sapiens

        <400> 11
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Leu Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys
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27

```
    1               5                       10                      15
Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn
            20                      25                  30
Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr
        35                      40                  45
Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile
    50                      55                  60
Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala
65                      70                  75                  80
Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr
                85                      90                  95
Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser
            100                     105                 110
Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln
            115                     120                 125


        <210> 12
        <211> 111
        <212> PRT
        <213> Homo sapiens


        <400> 12
Leu Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys
1               5                       10                      15
Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn
            20                      25                  30
Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr
        35                      40                  45
Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile
    50                      55                  60
Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala
65                      70                  75                  80
Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr
                85                      90                  95
Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val
            100                     105                 110


        <210> 13
        <211> 81
        <212> PRT
        <213> Homo sapiens


        <400> 13
Leu Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr Ser Met Lys
1               5                       10                      15
Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn
            20                      25                  30
Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly Val Gln Thr
        35                      40                  45
Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile
    50                      55                  60
Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala
65                      70                  75                  80
Ile


        <210> 14
        <211> 101
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```
    <212> PRT
    <213> Homo sapiens


    <400> 14
Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro
 1               5                  10                  15
Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys
            20                  25                  30
Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser
        35                  40                  45
Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val Lys Met Val Ser Gly
    50                  55                  60
Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser Asn His
65                  70                  75                  80
Val Ser Arg Thr Glu Val Ser Ser Asn His Val Leu Ile Tyr Leu Asp
            85                  90                  95
Lys Val Ser Asn Gln
            100


    <210> 15
    <211> 76
    <212> PRT
    <213> Homo sapiens


    <400> 15
Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro
 1               5                  10                  15
Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys
            20                  25                  30
Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser
        35                  40                  45
Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val Lys Met Val Ser Gly
    50                  55                  60
Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu
65                  70                  75


    <210> 16
    <211> 56
    <212> PRT
    <213> Homo sapiens


    <400> 16
Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro
 1               5                  10                  15
Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys
            20                  25                  30
Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser
        35                  40                  45
Arg Ser Ala Ser Asn Met Ala Ile
    50                  55


    <210> 17
    <211> 76
    <212> PRT
    <213> Homo sapiens


    <400> 17
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29

Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu
1   5   10   15
Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val
            20   25   30
Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys
        35   40   45
Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser Asn
    50   55   60
His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln
65   70   75

        <210> 18
        <211> 76
        <212> PRT
        <213> Homo sapiens

        <400> 18
Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu
1   5   10   15
Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val
            20   25   30
Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys
        35   40   45
Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser Asn
    50   55   60
His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln
65   70   75

        <210> 19
        <211> 31
        <212> PRT
        <213> Homo sapiens

        <400> 19
Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu
1   5   10   15
Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser Asn Met Ala Ile
            20   25   30

        <210> 20
        <211> 44
        <212> PRT
        <213> Homo sapiens

        <400> 20
Lys Thr Cys Ser Pro Lys Gln Phe Ala Cys Arg Asp Gln Ile Thr Cys
1   5   10   15
Ile Ser Lys Gly Trp Arg Cys Asp Gly Glu Arg Asp Cys Pro Asp Gly
            20   25   30
Ser Asp Glu Ala Pro Glu Ile Cys Pro Gln Ser Lys
        35   40

        <210> 21
        <211> 86
        <212> PRT
        <213> Homo sapiens

        <400> 21

30

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Lys Thr Cys Ser Pro Lys Gln Phe Ala Cys Arg Asp Gln Ile Thr Cys
1               5                   10                  15
Ile Ser Lys Gly Trp Arg Cys Asp Gly Glu Arg Asp Cys Pro Asp Gly
            20                  25                  30
Ser Asp Glu Ala Pro Glu Ile Cys Pro Gln Ser Lys Ala Gln Arg Cys
        35                  40                  45
Gln Pro Asn Glu His Asn Cys Leu Gly Thr Glu Leu Cys Val Pro Met
    50                  55                  60
Ser Arg Leu Cys Asn Gly Val Gln Asp Cys Met Asp Gly Ser Asp Glu
65              70                  75                  80
Gly Pro His Cys Arg Glu
                85


        <210> 22
        <211> 43
        <212> PRT
        <213> Homo sapiens


        <400> 22
Lys Ala Gln Arg Cys Gln Pro Asn Glu His Asn Cys Leu Gly Thr Glu
1               5                   10                  15
Leu Cys Val Pro Met Ser Arg Leu Cys Asn Gly Val Gln Asp Cys Met
            20                  25                  30
Asp Gly Ser Asp Glu Gly Pro His Cys Arg Glu
        35                  40


        <210> 23
        <211> 42
        <212> PRT
        <213> Homo sapiens


        <400> 23
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1               5                   10                  15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
            20                  25                  30
Glu Ala Pro Ala Leu Cys His Gln His Thr
        35                  40


        <210> 24
        <211> 82
        <212> PRT
        <213> Homo sapiens


        <400> 24
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1               5                   10                  15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
            20                  25                  30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
        35                  40                  45
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
    50                  55                  60
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
65              70                  75                  80
Ala Arg
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31

<210> 25
<211> 122
<212> PRT
<213> Homo sapiens

<400> 25

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Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1               5                   10                  15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
            20                  25                  30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
        35                  40                  45
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
    50                  55                  60
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
65                  70                  75                  80
Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys
                85                  90                  95
Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg
            100                 105                 110
Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro
            115                 120
```

<210> 26
<211> 161
<212> PRT
<213> Homo sapiens

<400> 26

```
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1               5                   10                  15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
            20                  25                  30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
        35                  40                  45
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
    50                  55                  60
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
65                  70                  75                  80
Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys
                85                  90                  95
Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg
            100                 105                 110
Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr
            115                 120                 125
Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys
    130                 135                 140
Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser
145                 150                 155                 160
His
```

<210> 27
<211> 208
<212> PRT
<213> Homo sapiens

<400> 27

32

Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1   5   10   15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
            20   25   30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
            35   40   45
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
    50   55   60
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
65   70   75   80
Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys
            85   90   95
Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg
            100   105   110
Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr
    115   120   125
Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys
    130   135   140
Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser
145   150   155   160
His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile
            165   170   175
Pro Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser
            180   185   190
Asp Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly
    195   200   205

        <210> 28
        <211> 150
        <212> PRT
        <213> Homo sapiens

        <400> 28
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1   5   10   15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
            20   25   30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
            35   40   45
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
    50   55   60
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
65   70   75   80
Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys
            85   90   95
Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg
            100   105   110
Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr
    115   120   125
Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys
    130   135   140
Asp Asn Asp Asn Asp Cys
145   150

        <210> 29
        <211> 231
        <212> PRT
        <213> Homo sapiens

33

<400> 29

```
Gln Cys Gln Pro Gly Glu Phe Ala Cys Ala Asn Ser Arg Cys Ile Gln
1               5                   10                  15
Glu Arg Trp Lys Cys Asp Gly Asp Asn Asp Cys Leu Asp Asn Ser Asp
            20              25                  30
Glu Ala Pro Ala Leu Cys His Gln His Thr Cys Pro Ser Asp Arg Phe
            35                  40                  45
Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn Arg Trp Leu Cys Asp Gly
    50                  55                  60
Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu Ser Asn Ala Thr Cys Ser
65                  70                  75                  80
Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys
                85                  90                  95
Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg
            100                 105                 110
Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr
        115                 120                 125
Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys
    130                 135                 140
Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser
145                 150                 155                 160
His Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile
            165                 170                 175
Pro Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser
            180                 185                 190
Asp Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly
        195                 200                 205
Gly Cys His Thr Asp Glu Phe Gln Cys Arg Leu Asp Gly Leu Cys Ile
    210                 215                 220
Pro Leu Arg Trp Arg Cys Asp
225                 230
```

<210> 30
<211> 40
<212> PRT
<213> Homo sapiens

<400> 30

```
Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn
1               5                   10                  15
Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu
            20                  25                  30
Ser Asn Ala Thr Cys Ser Ala Arg
        35                  40
```

<210> 31
<211> 80
<212> PRT
<213> Homo sapiens

<400> 31

```
Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn
1               5                   10                  15
Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu
            20                  25                  30
Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser
        35                  40                  45
Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp
```

Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro
65   70   75   80

<210> 32
<211> 119
<212> PRT
<213> Homo sapiens

<400> 32
Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn
1   5   10   15
Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu
         20   25   30
Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser
         35   40   45
Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp
     50   55   60
Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro
65   70   75   80
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
              85   90   95
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asp Cys Gly Asp Asn Ser
              100   105   110
Asp Glu Ala Gly Cys Ser His
         115

<210> 33
<211> 166
<212> PRT
<213> Homo sapiens

<400> 33
Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn
1   5   10   15
Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu
         20   25   30
Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser
         35   40   45
Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp
     50   55   60
Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro
65   70   75   80
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
              85   90   95
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser
              100   105   110
Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys
         115   120   125
Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
     130   135   140
Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln
145   150   155   160
Ala Thr Arg Pro Pro Gly
              165

<210> 34
<211> 108

<212> PRT
<213> Homo sapiens

<400> 34
Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn
1   5   10   15
Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu
            20   25   30
Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser
        35   40   45
Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp
    50   55   60
Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro
65   70   75   80
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
            85   90   95
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys
            100   105

<210> 35
<211> 289
<212> PRT
<213> Homo sapiens

<400> 35
Cys Pro Ser Asp Arg Phe Lys Cys Glu Asn Asn Arg Cys Ile Pro Asn
1   5   10   15
Arg Trp Leu Cys Asp Gly Asp Asn Asp Cys Gly Asn Ser Glu Asp Glu
            20   25   30
Ser Asn Ala Thr Cys Ser Ala Arg Thr Cys Pro Pro Asn Gln Phe Ser
        35   40   45
Cys Ala Ser Gly Arg Cys Ile Pro Ile Ser Trp Thr Cys Asp Leu Asp
    50   55   60
Asp Asp Cys Gly Asp Arg Ser Asp Glu Ser Ala Ser Cys Ala Tyr Pro
65   70   75   80
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
            85   90   95
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser
            100   105   110
Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys
    115   120   125
Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
    130   135   140
Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln
145   150   155   160
Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln Cys Arg
            165   170   175
Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr
            180   185   190
Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His
    195   200   205
Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys
    210   215   220
Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn
225   230   235   240
Ser Asp Glu Glu Asn Cys Glu Ser Leu Ala Cys Arg Pro Pro Ser His
            245   250   255

36

Pro Cys Ala Asn Asn Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys
            260   265   270
Asp Gly Asn Asp Asp Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys
            275   280   285
Asp

<210> 36
<211> 40
<212> PRT
<213> Homo sapiens

<400> 36
Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro
1   5   10   15
Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp
            20   25   30
Glu Ser Ala Ser Cys Ala Tyr Pro
            35   40

<210> 37
<211> 79
<212> PRT
<213> Homo sapiens

<400> 37
Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro
1   5   10   15
Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp
            20   25   30
Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe
            35   40   45
Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn
            50   55   60
Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser His
65   70   75

<210> 38
<211> 126
<212> PRT
<213> Homo sapiens

<400> 38
Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro
1   5   10   15
Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp
            20   25   30
Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe
            35   40   45
Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn
            50   55   60
Asp Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser His Ser
65   70   75   80
Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro Glu
            85   90   95
His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp Glu
            100   105   110
Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly

<210> 39
<211> 68
<212> PRT
<213> Homo sapiens

<400> 39
Thr Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro
1   5   10   15
Ile Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp
            20   25   30
Glu Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe
        35   40   45
Thr Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn
    50   55   60
Asp Asn Asp Cys
65

<210> 40
<211> 248
<212> PRT
<213> Homo sapiens

<400> 40
Cys Pro Pro Asn Gln Phe Ser Cys Ala Ser Gly Arg Cys Ile Pro Ile
1   5   10   15
Ser Trp Thr Cys Asp Leu Asp Asp Asp Cys Gly Asp Arg Ser Asp Glu
            20   25   30
Ser Ala Ser Cys Ala Tyr Pro Thr Cys Phe Pro Leu Thr Gln Phe Thr
        35   40   45
Cys Asn Asn Gly Arg Cys Ile Asn Ile Asn Trp Arg Cys Asp Asn Asp
    50   55   60
Asn Asp Cys Gly Asp Asn Ser Asp Glu Ala Gly Cys Ser His Ser Cys
65   70   75   80
Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro Glu His
                85   90   95
Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp Glu Thr
            100   105   110
His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly Gly Cys His
        115   120   125
Thr Asp Glu Phe Gln Cys Arg Leu Asp Gly Leu Cys Ile Pro Leu Arg
    130   135   140
Trp Arg Cys Asp Gly Asp Thr Asp Cys Met Asp Ser Ser Asp Glu Lys
145   150   155   160
Ser Cys Glu Gly Val Thr His Val Cys Asp Pro Ser Val Lys Phe Gly
                165   170   175
Cys Lys Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys Asp Gly
            180   185   190
Asp Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu Ser Leu
        195   200   205
Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val Cys
    210   215   220
Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly Asp Gly
225   230   235   240
Ser Asp Glu Gly Glu Leu Cys Asp
                245

```
<210> 41
<211> 39
<212> PRT
<213> Homo sapiens

<400> 41
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
1               5                   10                  15
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser
            20                  25                  30
Asp Glu Ala Gly Cys Ser His
        35


<210> 42
<211> 86
<212> PRT
<213> Homo sapiens

<400> 42
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
1               5                   10                  15
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser
            20                  25                  30
Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys
        35                  40                  45
Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
        50                  55                  60
Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln
65                  70                  75                  80
Ala Thr Arg Pro Pro Gly
                85


<210> 43
<211> 169
<212> PRT
<213> Homo sapiens

<400> 43
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
1               5                   10                  15
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser
            20                  25                  30
Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys
        35                  40                  45
Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
        50                  55                  60
Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln
65                  70                  75                  80
Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln Cys Arg
                85                  90                  95
Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr
            100                 105                 110
Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His
            115                 120                 125
Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys
        130                 135                 140
Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn
145                 150                 155                 160
```

39

Ser Asp Glu Glu Asn Cys Glu Ser Leu
                    165

        <210> 44
        <211> 209
        <212> PRT
        <213> Homo sapiens

        <400> 44
Thr Cys Phe Pro Leu Thr Gln Phe Thr Cys Asn Asn Gly Arg Cys Ile
  1   5   10   15
Asn Ile Asn Trp Arg Cys Asp Asn Asp Asn Asp Cys Gly Asp Asn Ser
            20   25   30
Asp Glu Ala Gly Cys Ser His Ser Cys Ser Ser Thr Gln Phe Lys Cys
        35   40   45
Asn Ser Gly Arg Cys Ile Pro Glu His Trp Thr Cys Asp Gly Asp Asn
    50   55   60
Asp Cys Gly Asp Tyr Ser Asp Glu Thr His Ala Asn Cys Thr Asn Gln
65   70   75   80
Ala Thr Arg Pro Pro Gly Gly Cys His Thr Asp Glu Phe Gln Cys Arg
            85   90   95
Leu Asp Gly Leu Cys Ile Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr
            100   105   110
Asp Cys Met Asp Ser Ser Asp Glu Lys Ser Cys Glu Gly Val Thr His
        115   120   125
Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys
    130   135   140
Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn
145   150   155   160
Ser Asp Glu Glu Asn Cys Glu Ser Leu Ala Cys Arg Pro Pro Ser His
            165   170   175
Pro Cys Ala Asn Asn Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys
        180   185   190
Asp Gly Asn Asp Asp Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys
        195   200   205
Asp

        <210> 45
        <211> 47
        <212> PRT
        <213> Homo sapiens

        <400> 45
Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro
  1   5   10   15
Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp
            20   25   30
Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly
        35   40   45

        <210> 46
        <211> 89
        <212> PRT
        <213> Homo sapiens

        <400> 46
Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro

40

```
     1                   5                        10                          15
   Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp
                 20                     25                    30
   Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly Gly
             35                     40                    45
   Cys His Thr Asp Glu Phe Gln Cys Arg Leu Asp Gly Leu Cys Ile Pro
         50                     55                    60
   Leu Arg Trp Arg Cys Asp Gly Asp Thr Asp Cys Met Asp Ser Ser Asp
   65                      70                    75                    80
   Glu Lys Ser Cys Glu Gly Val Thr His
                   85
```

```
        <210> 47
        <211> 170
        <212> PRT
        <213> Homo sapiens


        <400> 47
   Ser Cys Ser Ser Thr Gln Phe Lys Cys Asn Ser Gly Arg Cys Ile Pro
    1                   5                        10                          15
   Glu His Trp Thr Cys Asp Gly Asp Asn Asp Cys Gly Asp Tyr Ser Asp
                 20                     25                    30
   Glu Thr His Ala Asn Cys Thr Asn Gln Ala Thr Arg Pro Pro Gly Gly
             35                     40                    45
   Cys His Thr Asp Glu Phe Gln Cys Arg Leu Asp Gly Leu Cys Ile Pro
         50                     55                    60
   Leu Arg Trp Arg Cys Asp Gly Asp Thr Asp Cys Met Asp Ser Ser Asp
   65                      70                    75                    80
   Glu Lys Ser Cys Glu Gly Val Thr His Val Cys Asp Pro Ser Val Lys
                   85                     90                    95
   Phe Gly Cys Lys Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val Cys
                 100                    105                   110
   Asp Gly Asp Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys Glu
             115                    120                   125
   Ser Leu Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser
         130                    135                   140
   Val Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly
   145                    150                   155                   160
   Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp
                 165                    170
```

```
        <210> 48
        <211> 42
        <212> PRT
        <213> Homo sapiens


        <400> 48
   Gly Cys His Thr Asp Glu Phe Gln Cys Arg Leu Asp Gly Leu Cys Ile
    1                   5                        10                          15
   Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr Asp Cys Met Asp Ser Ser
                 20                     25                    30
   Asp Glu Lys Ser Cys Glu Gly Val Thr His
             35                     40
```

```
        <210> 49
        <211> 83
        <212> PRT
        <213> Homo sapiens
```

41

<400> 49
Gly Cys His Thr Asp Glu Phe Gln Cys Arg Leu Asp Gly Leu Cys Ile
1   5   10   15
Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr Asp Cys Met Asp Ser Ser
            20   25   30
Asp Glu Lys Ser Cys Glu Gly Val Thr His Val Cys Asp Pro Ser Val
            35   40   45
Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val
        50   55   60
Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys
65   70   75   80
Glu Ser Leu

        <210> 50
        <211> 123
        <212> PRT
        <213> Homo sapiens

        <400> 50
Gly Cys His Thr Asp Glu Phe Gln Cys Arg Leu Asp Gly Leu Cys Ile
1   5   10   15
Pro Leu Arg Trp Arg Cys Asp Gly Asp Thr Asp Cys Met Asp Ser Ser
            20   25   30
Asp Glu Lys Ser Cys Glu Gly Val Thr His Val Cys Asp Pro Ser Val
            35   40   45
Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys Ile Ser Lys Ala Trp Val
        50   55   60
Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn Ser Asp Glu Glu Asn Cys
65   70   75   80
Glu Ser Leu Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr
            85   90   95
Ser Val Cys Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys
            100   105   110
Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys Asp
        115   120

        <210> 51
        <211> 41
        <212> PRT
        <213> Homo sapiens

        <400> 51
Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys
1   5   10   15
Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn
            20   25   30
Ser Asp Glu Glu Asn Cys Glu Ser Leu
        35   40

        <210> 52
        <211> 81
        <212> PRT
        <213> Homo sapiens

        <400> 52
Val Cys Asp Pro Ser Val Lys Phe Gly Cys Lys Asp Ser Ala Arg Cys
1   5   10   15

42

Ile Ser Lys Ala Trp Val Cys Asp Gly Asp Asn Asp Cys Glu Asp Asn
              20   25   30
Ser Asp Glu Glu Asn Cys Glu Ser Leu Ala Cys Arg Pro Pro Ser His
          35   40   45
Pro Cys Ala Asn Asn Thr Ser Val Cys Leu Pro Pro Asp Lys Leu Cys
      50   55   60
Asp Gly Asn Asp Asp Cys Gly Asp Gly Ser Asp Glu Gly Glu Leu Cys
65   70   75   80
Asp

        <210> 53
        <211> 40
        <212> PRT
        <213> Homo sapiens

        <400> 53
Ala Cys Arg Pro Pro Ser His Pro Cys Ala Asn Asn Thr Ser Val Cys
1   5   10   15
Leu Pro Pro Asp Lys Leu Cys Asp Gly Asn Asp Asp Cys Gly Asp Gly
              20   25   30
Ser Asp Glu Gly Glu Leu Cys Asp
          35   40

        <210> 54
        <211> 10
        <212> PRT
        <213> Homo sapiens

        <400> 54
Ser Gly Phe Ser Leu Gly Ser Asp Gly Lys
1   5   10

        <210> 55
        <211> 10
        <212> PRT
        <213> Homo sapiens

        <400> 55
Gly Ile Ala Leu Asp Pro Ala Met Gly Lys
1   5   10

        <210> 56
        <211> 10
        <212> PRT
        <213> Homo sapiens

        <400> 56
Gly Gly Ala Leu His Ile Tyr His Gln Arg
1   5   10

        <210> 57
        <211> 11
        <212> PRT
        <213> Homo sapiens

        <400> 57

43

Val Phe Phe Thr Asp Tyr Gly Gln Ile Pro Lys
1   5   10